

DSAG RECOMMENDATIONS THE SAP BASIS TEAM OF TOMORROW



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DSAG RECOMMENDATIONS

THE SAP BASIS TEAM OF TOMORROW

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1. INTRODUCTION

SAP Basis teams and departments are facing huge changes and challenges within the SAP product portfolio, as well as in their own remit. These are the result of digitalization, digital transformation, new technologies such as cloud computing or Big Data, as well as developments in areas such as customer experience and the Internet of Things.

To help you overcome these challenges and support your SAP Basis team to grow and evolve, recommendations are grouped into seven areas by theme: skills and roles (cloud and supplier management, more technology architects, focus on project-based work), marketing and self-image (producing a service catalog, regular dialog with the CIO, renaming the SAP Basis team), new technologies and innovation (test and innovation labs, proactive and regular training), organization in transformation (defining specialist areas in terms of infrastructure and applications, virtual teams of experts), standardization and automation (automation of routine tasks, out-tasking of infrequent tasks), "cloudability", outsourcing and out-tasking (evaluating cloud usability, use of suitable service formats), and IT roadmap (influencing your own IT roadmap). By reflecting on these topics, we will demonstrate methods and opportunities to implement the recommendations in this publication.

TO HELP YOU OVERCOME THESE CHALLENGES AND
SUPPORT YOUR SAP BASIS TEAM TO GROW AND EVOLVE,
 RECOMMENDATIONS ARE GROUPED INTO SEVEN AREAS
 BY THEME.

2. PROJECT BACKGROUND: THE SAP BASIS TEAM OF TOMORROW

The aforementioned challenges facing SAP Basis teams were originally highlighted in a post in the Infrastructure and Operation forum on DSAGNet. This led to a lively discussion which attracted a huge amount of interest from DSAG members.

Building on member companies' interest and the demand for action, DSAG and SAP initiated a project focused on the future of SAP Basis teams. Various companies were invited to participate and were surveyed by DSAG to assess their willingness to collaborate on the project. The first project meeting took place at the 2015 DSAG Annual Conference in Bremen, Germany.

Following this, regular events were held at SAP's offices in Freiberg am Neckar and St. Leon-Rot, attended by up to 15 businesses.

As part of the "The SAP Basis Team of Tomorrow" project, companies' current challenges and the challenges facing the SAP Basis teams of tomorrow – in terms of IT landscape, processes and organizational structure – were discussed and addressed.

To document the outcomes and look at the various themes from a more detailed and technical perspective, a master's thesis was initiated and ran in parallel to the project. This was completed by Prof. Karl Liebstückel as part of his master's in Information Systems at the University of Applied Sciences in Würzburg-Schweinfurt, and was submitted for evaluation at the end of March 2016.

The thesis identified and discussed in detail influential factors such as technological trends and the SAP product strategy, as well as certain company-specific factors. Additionally, various empirical studies were carried out.

If you are a DSAG member and are interested in viewing the entire thesis, you can request a copy of the document by emailing info@dsag.de (password: Masterarbeit SAP-Basis von Morgen).

3. SKILLS & ROLES

To master the general challenge of digital transformation and to meet the changing demands placed on SAP Basis teams, existing roles must be revised and new roles defined and established. These include, for example, adapting the roles of technology architects, introducing new types of subject matter experts (SMEs), or even creating an Expert Team Lead for managing groups of experts.

Further details can be found in chapters 7.1 and 9.3 of the master's thesis.

A. RECOMMENDATIONS

A1. INCENTIVES TO CREATE NEW ROLES

To create new and revised roles within your company, you need incentives. This particularly applies to specialist roles. Incentives could be an offer to visit various conferences (for SMEs), or a clearly defined career path, training opportunities, or monetary incentives. The new roles would also allow increased visibility and greater participation in company decisions.

A2. HOLISTIC APPROACH TO ROLE TRANSITION

A holistic approach is required to ensure all existing core tasks (such as security or compliance) and new tasks (such as cloud or mobility-related tasks) are covered by the new roles. This means that some tasks should not simply be viewed within the context of the SAP Basis team, but within the wider context of the entire company.

A3. TRANSPARENCY ACROSS SAP BASIS ROLES

The new roles and their concrete formats in relation to the relevant company's structure must be acknowledged and accepted across the entire company, or at the very least by the IT department.

A4. TRANSITIONING TO NEW ROLES STRUCTURE

There are a number of different ways to transition to the new/revised roles. For example, new technology rollouts could be used to establish or shape/define the role of the SME or technology architect. Staff turnover and new hires are also suitable opportunities to transition to new roles. In general, it is recommended that the new roles are introduced and rolled out in line with your existing operating model.

B. BENEFITS & OUTCOMES

Strategically implementing the new roles structure provides transparency with regard to the complexity of each employee's role. At the same time, thanks to the SMEs generating expert knowledge across certain themed areas, communication can take place on an equal footing, both with upstream/downstream IT departments and with external service providers. The technology architect role also ensures that the bigger picture – in the context of the entire SAP product portfolio – is not lost. Additionally, any gaps in guidelines or security can be identified and dealt with.

On the whole, the new roles structure offers a useful tool for employees in their career planning, as well as providing insight into individual responsibilities and contacts for IT teams and other areas of the business.

C. CREATING NEW ROLES

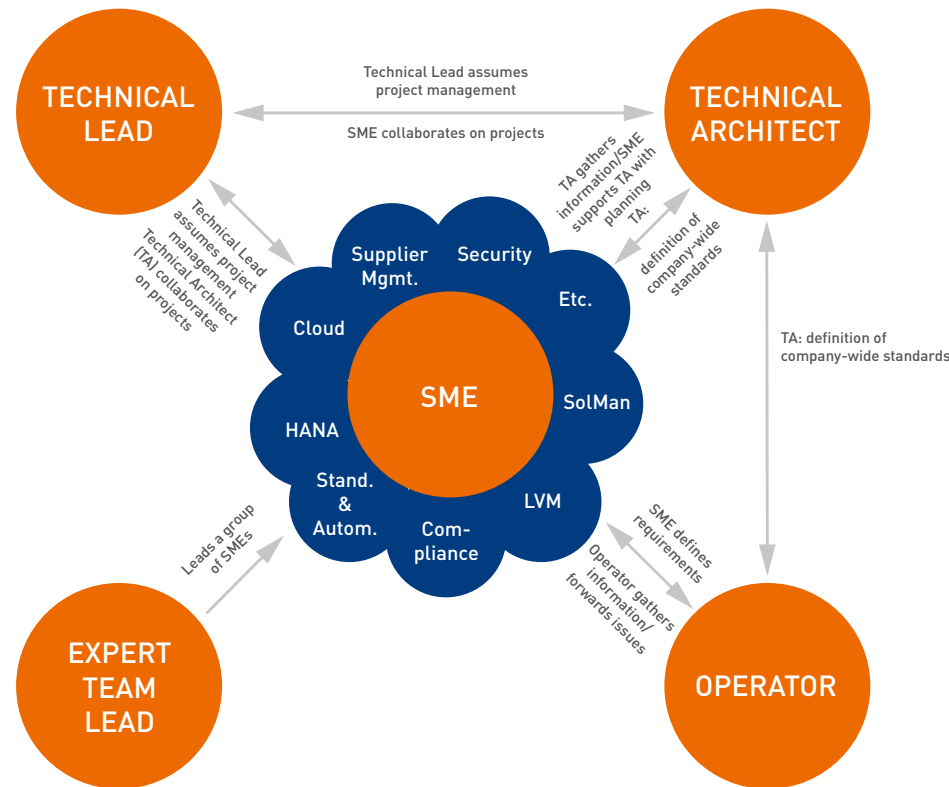


Figure 1: Future roles within an SAP Basis team

By establishing a new roles structure and creating new roles, an SAP Basis team has the capacity to support new tasks and trends and implement new technology and service formats. Now for a description of the roles:

OPERATOR (OP)

At present, the OP is responsible for ensuring the smooth and secure operation of the SAP environment. They have a fundamental understanding of the infrastructure and good connections within IT departments. They use various appropriate tools in their day-to-day work (e.g. monitoring tools), in which they are trained and practiced.

In future, the OP role will focus on reactive tasks such as monitoring systems and/or dealing with notifications. They will be a customer of the SME Standardization & Automation and SME Solution Manager. Some aspects of the OP role related to implementation and execution can be outsourced. However, the accountable aspects of the role should remain in-house.

SUBJECT MATTER EXPERT (SME)

The term SME denotes an expert for a specific specialist area, such as “SME databases”, or “SME SAP HANA” in the context of SAP products. Because of emerging new technologies and trends, this role is growing in importance. As such, the SME should be an expert in technology. They have good connections within IT departments and, potentially, in other areas of the business. To perform their tasks, they must have practical operational experience in their specialist area. They may also use expert tools to fulfill their responsibilities.

By precisely defining the various disciplines, the SME can now assume the many informal tasks of the traditional SAP Basis Administrator, as well as new responsibilities related to new technologies. There will also be new SME roles in future, such as SME Cloud, SME SAP HANA/Databases, SME Supplier Management, SME Security, SME Compliance, SME Standardization and Automation (SME Landscape Virtualization Management) and even SME Solution Manager. The SME Cloud liaises with the global Cloud Manager (if one exists in the company). Likewise, the SME Security liaises with and/or reports to global corporate security. An SME Supplier Relationship Management or SME Supplier Management role should have both an internal (liaising with other departments) and external focus (liaising and communicating with suppliers). The SME Cloud role is a special type of SME Supplier Management role.

In future, SMEs will support area-specific out-tasking – especially for infrequent tasks such as upgrades – and will create the necessary documentation (for example, on interfaces and customer developments) so that they can access them themselves in the event of an emergency.

TECHNOLOGY ARCHITECT (TA)

The TA is familiar with the essentials of the company's core business and is an expert in business processes and project management. However, the TA does not carry out any project management activities within the scope of their role. They design and develop strategies and solutions in cooperation with superiors, IT departments, and business units. They also define the requirements for implementation and operation, which they then agree on with the OP or relevant SME. At the same time, they drive forward the adoption of new technologies within their field and serve as a contact for the company's enterprise architects.

In future, this role will become increasingly focused on coordination activities, which means a greater variety of responsibilities. Going forward, a TA should also have an understanding of a company's business policies.

TECHNICAL LEAD (TL)

The TL acts as a work package lead or subproject manager within the SAP Basis team, where a project is a focus area for the team.

The TL role is becoming more important as the SAP Basis team's role increasingly becomes that of a technology advisor, with a greater number of projects anticipated in future. This role will be required more frequently in future. Due to the increasing responsibilities attached to the role and its increasing professionalization, a considerable amount of training and development is required.

EXPERT TEAM LEAD (ETL)

The ETL leads a group of specialists or SMEs, or a specific technical area such as a group of operators. For example, the ETL may manage and coordinate a team of virtual experts, from various IT departments, all focused on print management. The ETL serves as an interface to the SAP Basis team and a contact for other departments, such as memory management or operating systems.

Working with other IT departments, the Technical Team Lead leads groups of experts. These groups are generally virtual and created for a certain period. In the case of topics and projects that are of special importance to SAP Basis, the Technical Team Lead serves as a (sub)project manager, handling all project management and monitoring activities.

BY ESTABLISHING A NEW ROLES STRUCTURE AND CREATING NEW ROLES, AN SAP BASIS TEAM HAS THE CAPACITY TO SUPPORT NEW TASKS AND TRENDS AND IMPLEMENT NEW TECHNOLOGY AND SERVICE FORMATS.

4. MARKETING & SELF-IMAGE

The definition, organizational structure and name of the SAP Basis team are based on previous SAP software versions and components.

This in turn has defined how SAP Basis and the related areas of SAP NetWeaver and ABAP are perceived – and this perception is still widespread today. However, the scope of tasks and technologies addressed by the SAP Basis team has changed significantly, and will continue to change in light of the evolving perspective and product strategy of SAP and the changing role of IT.

To deal with this transformation and change the perception of the entire SAP ecosystem within individual companies, the SAP Basis team must adapt its image and market its services effectively.

The following information can be found in chapters 7.4 and 9.2 of the master's thesis.

A. RECOMMENDATIONS

A1. NEW TECHNOLOGIES AND INNOVATIONS

The role of IT is evolving (bimodal IT). In terms of an SAP Basis team, this new bimodal structure is especially critical. On the one hand, it must ensure the continued reliability and security of SAP operations. On the other hand, it must serve as a business innovator in order to effectively fulfill the role of an advisor on SAP technology.

A2. CHANGING THE NAME OF SAP BASIS

SAP Basis' original name and definition is no longer accurate in the context of the tasks and activities it performs today. It is therefore recommended that the SAP Basis team be given a meaningful, contemporary name that is aligned with its future structure. This should take into account the bimodal role of IT described under recommendation [4. A1]. Some example names: SAP Cross Application, SAP Innovation & Technology, SAP Services & Innovation, SAP Operations & Innovation, or SAP Service Provider & Business Innovator.

A3. DESCRIBING YOUR SERVICE PORTFOLIO

To ensure that you are consulted by up or downstream departments, it is important to produce a detailed and easily comprehensible service portfolio. This can be used to clearly define in which instances the SAP Basis team should be contacted in order to make decisions and avoid endangering the success of a project or company. As well as defining the tasks that the SAP Basis team covers, it is also important to state which activities and areas the team is not responsible for. This is a general recommendation that applies to all IT departments, and should help to clearly differentiate between them and document the capabilities of an organization's in-house IT resources.

A4. PLANNING AND EXECUTING INTERNAL MARKETING

Building on recommendation [4. A3], an internal marketing strategy should be developed and established. As part of this, it is important to clearly describe how the roles and activities of the SAP Basis team have contributed to the company's success. Noteworthy projects should be documented and circulated as success stories, to highlight the value of the SAP Basis team. These success stories can be distributed from within the SAP Basis team or externally. For example, they could be incorporated into communications from the CIO or into project reports.

B. BENEFITS & OUTCOMES

The added value that comes from implementing these recommendations lies in the continued reliability and security of operations. A company – and in particular an IT department – with a strong SAP Basis team also has an expert and well-informed partner for SAP technologies and topics, and a team who always has one eye on the wider SAP picture.

Furthermore, internal marketing will make all business and IT departments aware of the role and remit of the SAP Basis team – enabling them to contact the team in good time when required. This increases transparency and reduces the risk of any areas establishing a shadow IT system using SAP technology.

For the SAP Basis team, the new self-image provides a more attractive, responsible and appealing work environment. The variety of technology deployed can be monitored and limited to what's necessary. There is also transparency with regard to the available interfaces, and a manageable flow of data that meets data security standards.

C. GUIDE TO DEVELOPING A MARKETING CONCEPT

The marketing mix model is appropriate in this instance. Generally this comprises four pillars – the four Ps: product, price, place, and promotion. When it comes to service delivery, a fifth P – “personnel” – is often applicable too. The marketing mix model is actually intended for use in the external sales of products and services. However, aspects of it can be applied to internal marketing of the SAP Basis service portfolio.

The following guide to developing a marketing concept has been put together to help you shape your marketing mix.

STEP 1: DESCRIBING SERVICES

This step involves describing the services that are being offered and categorizing them by type, for example, primary and secondary services.

In terms of SAP Basis, this step should focus on analyzing the product portfolio and creating IT products and a product catalog.

STEP 2: AVAILABLE RESOURCES

You should then identify which resources are already available for use, and which are yet to be established. Resources include people, equipment, systems, and expertise, as well as financial resources.

For SAP Basis, this step is similar to an inventory.

STEP 3: DEFINING GOALS

This step involves defining a service provider's mission and vision. Additionally, quantifiable targets should be set for the next three years. This step is especially important for the SAP Basis team. It relates to the self-image and perception described in the “Marketing & Self-image” section, as well as the external expression of a mission and vision. The team must define which role it wants to assume within the company.

STEP 4: DEFINING A TARGET GROUP

In this step, the target group for a service is defined and described in detail, for example, by creating a profile. It also involves defining potential target groups that may be of interest in future.

By defining a target group within the company, the SAP Basis team decides who its services and products should be provided to. But it also makes sense, in the context of the transformation of SAP Basis, to identify and describe future target groups (e.g. specialist departments).

STEP 5: POSITIONING

This step aims to position a service within the market and the competitors in that specific segment. This positioning should take into account the previously identified target groups.

For an SAP Basis team, positioning is extremely important. First and foremost, the focus should be on positioning it within the IT department and differentiating it from other departments which could be seen as competitors in the context of this process.

STEP 6: AVAILABLE STAFF

This step involves identifying the skills and training measures for staff that are required to meet the goals and deliver the service.

The necessary skills and roles for an SAP Basis team are described in detail in the “Skills & Roles” section.

STEP 7: PRICING

In this step, a pricing strategy is chosen. The relevant strategy must take into account the cost-benefit ratio, and the decision should be explained and justified. Following this, the price of the service is defined, and formal decisions made about the various billing models and any discounts.

In terms of SAP Basis, this step is less important. While a price should be assigned to IT products and services to facilitate valuation and billing, an extensive and complex pricing system is not necessary.

STEP 8: MARKET COMMUNICATION

Market communication describes the way in which a service is promoted and communicated to customers. This includes the communication tools (where the communication will take place), the communication means (how the communication will take place), and the content. These should be aligned with the previously identified target groups.

For an SAP Basis team, content is a particularly key feature of market communications. Information should be produced and communicated with a clear focus on the target group.

STEP 9: INTERNAL COMMUNICATION

Internal communication describes how the aforementioned information is also communicated effectively within the company, to employees. All the topics that may be of interest to a customer are also relevant here. Ideally, there should be a balanced communications structure based on the triad of marketing, target group, and internal staff.

Internal communications are critical for SAP Basis. You must be able to communicate your services, IT products, and positioning effectively to your own employees.

STEP 10: PLANNING

Planning means translating the steps above into tangible measures, with a clear definition of each measure. The activities can now be scheduled and a cost overview drawn up. Above all, it is important to plan realistically and take into account any dependencies.

This step is also of enormous interest for SAP Basis and is essential in order to implement the other steps in a concrete, integrated marketing concept.

For an SAP Basis team, developing a marketing concept not only involves external communications in the sense of advertising – it also involves downstream steps such as defining your service portfolio and positioning. The targeted implementation of this guide can support you in both external communications and positioning and differentiating yourself within the broader IT organization.

QUOTE FROM A PROJECT TEAM MEMBER:

“I’VE NEVER SEEN COLLABORATION LIKE THIS AT DSAG. LIKE A REAL PROJECT TEAM, WE’VE WORKED TOGETHER ACROSS COMPANIES, CONTRIBUTING OUR VARIOUS EXPERIENCES. THE THESIS IS NOW THE FOUNDATION FOR A CHANGE PROCESS IN OUR COMPANY.”

5. NEW TECHNOLOGY & INNOVATION

In the age of digitalization, information technology plays an even more critical role. Innovation without IT is now unthinkable. But it's not just technology itself that is important – it's also the means and manner in which it's provided. The SAP Basis team of the future should serve as a partner and point of contact for new SAP technologies.

Further details on this recommendation can be found in chapters 7.5 and 9.3 of the master's thesis.

A. RECOMMENDATION

A1. INITIATE PILOT AND RESEARCH PROJECTS

To get a head start when it comes to new SAP technologies, proof of concepts and research and development (R&D) projects must be initiated to build up expertise and evaluate any constraints or even project feasibility. This will also support the evaluation of new business models – and their underlying technology – in collaboration with the relevant department.

A2. ESTABLISH AN SAP INNOVATION TEAM

To be a pioneer of innovation within the company, you need a dedicated team or group of experts with a clear aim of driving forward R&D projects and proof of concepts, continuing to train in these areas, and developing innovation proposals and submitting them to management for review. They should remain far removed from IT operations.

A3. SET UP A TEST LABORATORY

You must then establish the resources and conditions for executing R&D and pilot projects. We recommend setting up a test laboratory that is subject to as few constraints as possible in terms of the company's procedural standards. These standards are often so extensive that they can impede the speed or usefulness of pilot projects, or even lead to their shutdown.

A4. REGULARLY ATTEND INFORMATION EVENTS

You should regularly take part in events hosted by SAP, DSAG, and third parties, and access their information and media, in order to stay up to date on changes within the SAP product portfolio and any related technological developments.

A5. DEVELOP EMPLOYEES' SKILLS

To retain a good overview of the wider technology picture and the innovations for which the SAP Basis team is responsible, ongoing employee training is essential.

A6. CREATE ROOM FOR MANEUVER

To give pilot and R&D projects room for maneuver and to meet growing requirements, you need to increase capacity. This could be done by topping up existing resources and/or implementing new measures such as standardization and automation, or "cloudability", outsourcing, and out-tasking.

A7. INTEGRATE NEW TECHNOLOGIES – SUPPORT NEW SCENARIOS

In the age of digitalization, there's no need to reinvent the wheel. Certain functions are only used via platforms, without operating the underlying infrastructure in-house. To get a head start on this over competitors, you should roll out and use these technologies, and keep up to speed on the opportunities they offer. Examples include using cloud services or applications based on the Internet of Things and Big Data.

A8. INNOVATION MANAGEMENT

Because innovations based on the Internet of Things or Big Data not only affect the SAP Basis team, but can also boost your customers' products and services, the role of SAP Basis in relation to these scenarios and services must be clearly defined. Generally, the SAP Basis team is primarily responsible for their connectivity with the company's network/systems which are a part of their remit. Any applications based on these technologies, and their associated services, are the responsibility of the individual department offering these services. Any support provided by SAP Basis must be agreed on during planning and tightly regulated.

A9. STEADY FLOW OF INFORMATION

To create the necessary room for maneuver, and to highlight the innovative power of the SAP Basis team, we recommend reporting regularly to the CIO or management, for example. Additionally, success stories about specific products or technologies could be distributed within the company, as part of the wider SAP Basis marketing strategy (see chapter 7.4 of the master's thesis).

B. BENEFITS & OUTCOMES

The main benefit of implementing these recommendations is that it enables the SAP Basis team to show its innovative power, and this can be documented. Through targeted research and testing, SAP Basis can take on the role of a pioneer in innovation. This will also create an attractive and exciting work environment for employees. Involving SAP Basis in projects at the right time can underpin a project's success and contribute to the success of the entire company in the medium and long term.

One potential effect of increasing employees' workload may be staff departures, and the expertise that is lost when they leave. This may also mean that the entire remit of SAP Basis ends up being handled by external partners, which can lead to a company becoming dependent on them.

C. THE OPEN INNOVATION MODEL

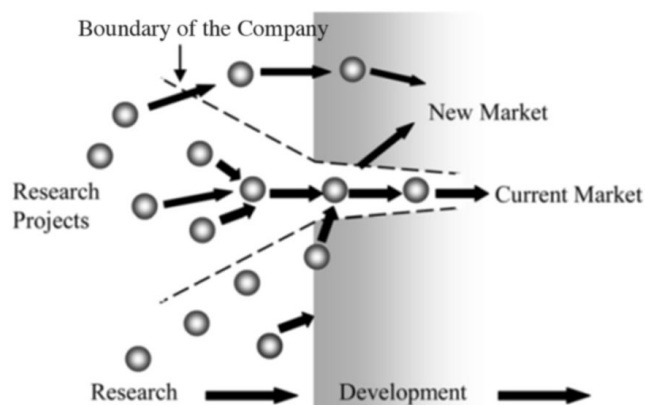


Figure 2: The open innovation model

When it comes to generating, evaluating, and selecting ideas, the open innovation model comes into play. In a closed innovation model, innovation comes solely from within the company itself, whereas with an open innovation model, various sources are used for generating ideas. It is therefore necessary to open up the innovation process, as illustrated in Figure 2. This shows the dotted lines of the company boundaries, with the dots representing ideas which can be generated both within and outside the company.

The open innovation approach can be divided into three core processes: the outside-in process, the inside-out process, and the coupled process. The outside-in process involves using knowledge and expertise from external sources to generate ideas – for example, through collaboration with other companies, suppliers, or even customers. The inside-out process supports development, commercialization, and provision to markets outside of your own company when internal implementation of the idea only has a limited chance of success. The coupled process combines these two strategies. Through joint development and commercialization, it aims to generate successful, network-based cooperation.

For SAP Basis, the outside-in process in particular plays a key role in idea generation. To establish an innovation team or test lab, ideas from outside of the SAP Basis team must be permitted and other idea sources – both within and outside the company – must be taken into consideration. These other sources might be other departments, external service providers, higher-education institutions, or even a lecture series on a specific topic.

SEIZING THE OPPORTUNITIES OF SAP BASIS

ALMOST EVERY INNOVATION WITHIN A COMPANY HAS A TECHNOLOGICAL FOOTPRINT IN THE BACK END, WHICH IS USUALLY BASED ON AN SAP SYSTEM. THIS IS WHERE SAP BASIS CAN HELP CREATE ADDED VALUE FOR THE COMPANY. INVOLVING THEM IN A PROJECT EARLY ON IS CRUCIAL.

6. AN ORGANIZATION IN TRANSFORMATION

As an organizational unit within an expanded IT department, the SAP Basis team faces a broad array of changes. Due to the increasing number of technologies and growing demand for integration and collaboration with upstream/downstream IT departments, the area in which SAP Basis operates is continuously growing.

Example organizational approaches/structures and further information can be found in chapters 7.6 and 9.4 of the master's thesis.

A. RECOMMENDATIONS

A1. KEEP COMPLEXITY PER EMPLOYEE TO A MINIMUM

If all the tasks requiring an interface are supported by the SAP Basis team, this results in a very broad remit, which means you need to avoid overworking your own staff and keep the complexity per employee to a minimum. Serving as an interface requires the team to grow accordingly. This recommendation is general and is not only relevant to the SAP Basis team.

A2. REDUCE AND AVOID ORGANIZATIONAL CONFLICTS

The SAP Basis team needs a clearly defined boundary between itself and upstream/downstream IT departments. For example, in terms of infrastructure, this might be the top level of the operating system. There must also be a boundary with application development. There are a number of services today which are provided by SAP Basis but which are more application-focused, such as monitoring background processing, transportation, or automating certain tasks. Generally, you should determine which tasks should continue to be performed by SAP Basis, and which can be handed over to expert units established specifically to deal with them.

A3. INTRODUCE A COMPANY-WIDE INTERFACE TEAM

To cope with increasing integration and coordination between internal IT departments and external service providers and suppliers, it's important to establish an interface team within the IT department. Here, the SAP Basis team can assume the role of coordinator and interface for SAP products and technologies.

A4. SPLIT SAP BASIS INTO APPLICATION-FOCUSED AND INFRASTRUCTURE-FOCUSED TEAMS

To provide the required expertise to both application-focused IT departments and infrastructure units, SAP Basis should be split into infrastructure-focused and application-focused teams. The infrastructure-focused team should serve as the main point of contact for IT departments such as virtualization, storage management, and databases, while the application-focused team should serve as a main point of contact and coordinator for all application-related issues.

A5. SET UP OVERARCHING TEAMS OF EXPERTS INCLUDING SAP BASIS STAFF

To reduce organizational conflicts and deal with specific issues as effectively as possible, we recommend setting up expert teams that include SAP Basis staff. These teams could work together virtually, be temporary, and feature members from all the relevant IT departments or business units. If the issue being tackled by the virtual team is also a key focus for SAP Basis, SAP Basis should oversee the project on a managerial level.

A6. FIX THE SILO MODEL/DIVISION BETWEEN SAP AND NON-SAP RESPONSIBILITIES

Due to the variety of technology available today, including in the SAP product portfolio, a silo-based approach to support is no longer feasible. There are many activities which, for historical reasons, reside with both the SAP Basis team and non-SAP department. Here, the division between SAP and non-SAP remits should be reviewed through standardization, integration, and centralization, and – where possible – resolved. To give an example, output management should reside with a team that has expertise in both SAP and non-SAP printing as well as contacts in SAP Basis. The SAP Basis team should also provide the non-SAP teams with tools to support their work in the SAP environment.

B. BENEFITS & OUTCOMES

Creating a cross-function team supports and safeguards operation of the SAP systems which are the backbone of the company. Aligning SAP Basis with other IT teams ensures that any optimization work is always carried out in the wider context of the entire company and/or IT department.

Additionally, resolving the division between SAP and non-SAP areas, where appropriate, leads to the creation of expert groups and synergy through centralization.

C. INTEGRATING SAP BASIS IN THE ORGANIZATION AS A CROSS-FUNCTION TEAM

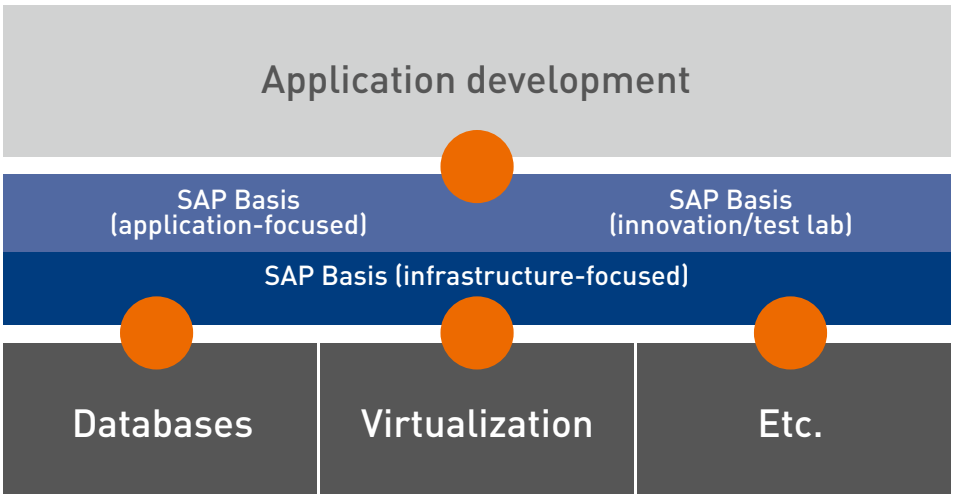


Figure 3: SAP Basis as a cross-function team

Following our recommendation to split SAP Basis into application-focused and infrastructure-focused teams [6. A4], Figure 3 presents one possible way this could work. The interface role of SAP Basis is divided into an application-focused SAP Basis team, which is responsible for coordinating and communicating with vertical and upstream IT departments and business units, and an infrastructure-focused SAP Basis team. The latter serves as a link between the application-focused SAP Basis team and infrastructure levels, and should be made up of subject matter experts. The application-focused SAP Basis team should largely be made up of technology architects.

The innovation team within SAP Basis should be based within the application-focused team because its skills and resources will enable this team to assume a leading, coordinating role and to source expertise from both the infrastructure-focused team and downstream IT departments.

7. STANDARDIZATION & AUTOMATION

To reduce complexity in SAP Basis operations, accelerate/simplify SAP Basis tasks, and free up capacity, you need to standardize and automate activities.

Further details can be found in chapters 7.7 and 9.5 of the master's thesis.

A. RECOMMENDATIONS

A1. REDUCE THE VOLUME OF CUSTOMER SPECIFICATIONS

To limit the variety of different systems in use and the amount of routine tasks associated with these, it is important to reduce the number of customer specifications. In particular, the implementation, set-up, and configuration of systems and security concepts should be standardized or restored to SAP standards. This requires working with the relevant IT departments to create a standard for operating systems and databases, within the constraints of the product in question.

A2. STANDARDIZE TASKS

Regular maintenance activities and standard procedures must be described and defined to support the creation of checklists and ensure compliance with these standards. The SAP Solution Manager – with its guided procedures function – can be used as a tool for this task. In this context, it is also important to document the functionality of the underlying application and define which testing and monitoring activities are needed. This requires an approval process between SAP Basis, other IT departments, and potentially the affected area(s) of the business.

The defined standard and current situation should be documented in detail and regularly checked for compliance. This can be done via automated monitoring, by validation with tools such as SAP Landscape Virtualization Management (LVM) or SAP Solution Manager, or by using manual checklists. This is the only way to ensure compliance.

SAP services such as Go-live Checks or Early Watch may also prove helpful here.

Here are a few examples of procedures that can be standardized:

- Naming of system instances and logical hosts and/or at least one central registration in a directory, or LVM or SAP portal
- Central system start and stop functions, for example, using LVM
- Categorization of SAP instances using T-shirt sizes in order to define profile standards and allocate costs

A3. DRIVE FORWARD THE AUTOMATION OF TASKS

Tasks such as updating components, carrying out security updates, or monitoring should continue to be automated. We recommend using a single automation tool (SAP Solution Manager or SAP LVM) for this task. Where possible, you should avoid using custom solutions and scripts, or replace these with standard tools. Otherwise, various script languages and versions will need to be managed, requiring greater administration. Standardized SAP scripts are highly recommended here. Additionally, a sensible definition of threshold values – for example, based on historical system behavior – is required for monitoring purposes.

A4. PROFESSIONALIZE SAP OPERATIONS AND THE SAP WORLD

In general, all SAP operations and associated tasks require further professionalization. This includes documenting the most crucial and business-critical processes, and checking that they are up to date and valid. Furthermore, services provided by SAP Basis through IT service management should be captured and described, as well as technologies – such as using an RACI matrix used to identify and document responsibilities within the SAP Basis team.

A5. MONITOR AND MODIFY STANDARDIZATION

Where there are rules for standardizing SAP systems, tasks, and procedures, these should be complied with in full and the compliance monitored. In the event of non-compliance – for example, due to project circumstances or technical issues – the standard should be restored in near real time. Resources must be made available to do this.

A6. STANDARDIZE AND VIRTUALIZE

Establishing a software-defined data center or even IaaS are key to increasing the flexibility and standardization of an SAP-based infrastructure. Using individual virtualized components such as servers, networks, or memory, a software-defined data center aims to create an abstraction layer that manages, monitors, provides, and automates the entire infrastructure.

A7. DEVELOP A MONITORING STRATEGY FOR HYBRID LANDSCAPES

Because hybrid landscapes are often viewed as the operating model of the future, it is important to develop corresponding monitoring strategies. Above all, it is essential to get a comprehensive view of the entire process – and not just a view of the individual systems, services, or components that are involved. This will help meet the requirement for SAP Basis to serve as a company-wide interface.

A8. OUTSOURCE NON-SAP PRODUCT SUPPORT

In an initial outsourcing step, support of non-SAP products such as fax servers or archiving systems can be handed over to more suitable IT departments within the company, or to external specialists.

A9. SIMPLIFY COMMUNICATIONS

Simplifying communications within IT departments requires channels and contacts to be clearly defined, and standardized communication tools to be used. It would also be helpful to name points of contact for upstream/downstream IT departments, external service providers, and suppliers.

A10. OUT-TASK COMPLEX AND INFREQUENT ACTIVITIES

For the tasks described above, which are more infrequent and involve a certain degree of complexity due to the lack of routine or process expertise, you should check whether they can be performed more efficiently by an external service provider. One question that needs clarifying is whether it's necessary to retain the required expertise within the company, to be able to respond more quickly than an external provider, for example, to issues concerning business-critical systems. Security concerns should also be considered, as external individuals will have access to internal systems. Services delivered via out-tasking should be regularly monitored and verified in terms of quality and documentation. No company should be completely dependent on external partners.

A11. OUT-TASK ROUTINE TASKS THAT CANNOT BE AUTOMATED

Tasks that are relatively straightforward, but that cannot be automated, should also be looked at as potential candidates for out-tasking – to relieve the workload of the internal SAP Basis team.

A12. INTRODUCE RELEASE AND PATCH MANAGEMENT

To safeguard system reliability and reduce risks associated with in-house developments, we recommend release and patch management. Here, standardized procedures may be helpful for introducing in-house developments – such as testing strategies or service level agreements (SLAs). The launch of customer applications must also be aligned with maintenance windows and recovery time objective.

A13. CONSIDER KPIS WHEN DRAFTING CONTRACTS WITH EXTERNAL SERVICE PROVIDERS

Contracts with external partners should take into account and include key performance indicators (KPIs) for assessing quality, as well as defined SLAs and implementation timelines.

A14. FOLLOW AN ORDER IN OPTIMIZATION

Standardization of SAP operations and SAP systems can be viewed as a form of preparation for automation and service formats such as the cloud, out-tasking, or even outsourcing. That is why it is important – in the wider context of standardization and automation – to follow an order when it comes to reviewing tasks and systems. First, there should be comprehensive documentation of the relevant equipment, including details of its current status. Following this, a standardization strategy can be developed and implemented. Only then can you start thinking about automation activities and approaches such as out-tasking, the cloud, or outsourcing.

B. BENEFITS & OUTCOMES

One key benefit of standardization and automation is the quality improvement in tasks and processes, as manual errors can be almost entirely eliminated. Furthermore, tasks can be completed much more quickly. In turn, the proportion of time dedicated to administration and operating your company's system landscape can be significantly reduced.

C. ESTABLISHING AN IT PRODUCT CATALOG

When it comes to standardization, there's not only an impact on IT product administration; there's also the standardization and simplification of the IT products offered by the SAP Basis team. Tools such as ITIL are already established when it comes to the standardized execution of tasks and creating IT product and service catalogs. Here, the IT services being provided are explained in clear terms. In addition to service definitions, any service exclusions and requirements are also described. The service description is accompanied by a price, which may comprise both fixed and variable components. This simplified, integrated product portfolio also aims to reduce administrative time and effort when it comes to orders, activations, modifications, terminations and, of course, billing. As such, describing IT services and creating an IT product catalog is the basis for standardization, regardless of whether the person receiving the service is an external or internal customer (such as a business unit).

The definition of IT products, i.e. bundled IT services and resources, poses a special challenge. Thinking along the lines of cloud computing may be a useful starting point here. The main features of cloud computing are standardization in terms of service type and delivery provisions, result-driven services, service provision to a number of recipients, scalability, transaction-based billing, and a high degree of risk with downtime.

Within the context of the SAP Basis team, one example could be the provision of an SAP application server for a popular SAP system. Parameters might include the number of processors, memory, disk space, operating system, and runtime environment. Instead of allowing every customer to determine each parameter for themselves, the SAP Basis team could create bundles – for example, a "power server" with increased processor performance, memory, and disk space, and the "light server" with simpler options. Each bundle would be priced differently, and prices should be considered and agreed on in advance.

The idea of basing IT services on reproducible standards is directly related to the standardization of processes and technical specifications. Standardized products can only be provided if processes are standardized. Likewise, products can only be offered in simple, transparent bundles if technical standards are established.

ONE KEY BENEFIT OF STANDARDIZATION AND AUTOMATION IS THE QUALITY IMPROVEMENT IN TASKS AND PROCESSES, AS MANUAL ERRORS CAN BE ALMOST ENTIRELY ELIMINATED.

8. "CLOUDABILITY", OUTSOURCING & OUT-TASKING

There are a number of different options when it comes to implementing and operating new applications. Companies can choose between in-house implementation and operation, outsourcing, cloud computing, and out-tasking. When selecting a suitable approach, the SAP Basis team should be involved in evaluating the various technological and operational factors, to ensure they can make an informed, well-founded decision. This decision will have a significant impact on future SAP operations and the associated resources required for operation and maintenance. The recommendations listed below are intended as a tool to help you in selecting new service formats.

Information on these recommendations can be found in chapters 7.8 and 9.6 of the master's thesis.

A. RECOMMENDATIONS

A1. EVALUATE EXISTING SOLUTIONS FOR CUSTOMER SPECIFICATIONS

In the case of existing solutions, it's necessary to determine to what extent they have been modified using customer specifications. The more modifications, the more time and effort required for maintenance – including testing, for example, for upgrades. Systems/applications with fewer customer specifications may be more suitable for external operation using one of the aforementioned service formats.

A2. PRODUCE A CRITERIA CATALOG

To solve this challenge, a criteria catalog should be developed to evaluate the feasibility/suitability of specific applications for certain service formats. The service catalog should be structured so that it highlights the criteria which cannot be easily met, and facilitates detailed examination of them. Generally, the criteria catalog cannot determine a final decision; it can only serve as a decision-making tool and define absolute "must-haves".

A3. RESTORE MODIFICATIONS TO SAP STANDARD

At the same time, solutions must be restored to SAP standard. IT/technology should work with other departments to estimate the technical time and effort involved and the business benefits. It's necessary to check whether adapting business-critical processes to avoid modifications to the implementation could potentially be more effective and/or cost-efficient. This should be evaluated and agreed upon together. Following this, we recommend defining and implementing company standards for solution development and maintenance.

A4. BENEFITS OF STANDARDIZATION AS THE BASIS FOR OUTSOURCING

The greater the degree of standardization in operational and maintenance tasks, the more effectively operational and maintenance tasks can be carried out. At the same time, standardization simplifies outsourcing and, potentially, use of a cloud-based solution.

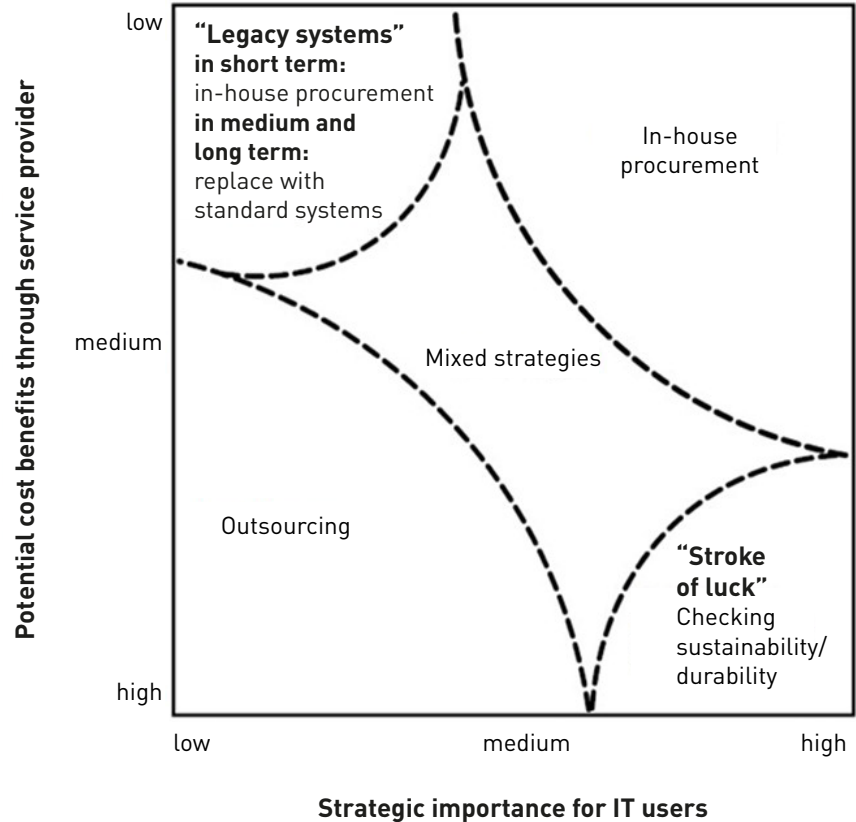
A5. SELECT A SUITABLE SERVICE FORMAT

Regardless of the service format that's chosen – whether it's outsourcing or out-tasking – the overall responsibility for the availability and performance of IT-based applications remains in-house. This includes internal coordination of maintenance windows and new releases. Additionally, any third-party services must be regularly monitored and checked for quality. Therefore, the chosen IT strategy should be as low risk as possible. If technical operations are not taken into sufficient consideration when making a decision, this can pose a significant business risk.

B. BENEFITS & OUTCOMES

By effectively evaluating the suitability of your company's applications for outsourcing to an external service provider or the cloud, you can minimize the risk associated with your chosen service format. Additionally, any potential weaknesses or aspects that may require special attention can be identified and addressed. As a result, any negative impact during operation can be almost entirely excluded.

C. CHOOSING BETWEEN IN-HOUSE PROCUREMENT AND OUTSOURCING



Deciding whether to outsource a specific task or service should not only take into account costs, but should also include an evaluation of competitive differentiation and strategic importance. When looking at costs, key factors include how specific the task is, and the impact of economies of scale, i.e. decreasing costs for an increasing number of tasks/services outsourced. Tasks and services which cannot easily be replicated by competitors are of special strategic importance.

Figure 4 illustrates the strategic importance and cost benefits of in-house procurement vs. outsourcing, to help you to decide whether or not to outsource specific IT tasks/ services.

Furthermore, as set out in recommendation 8. A2, it is worth developing a criteria catalog to facilitate review and assessment of the application's or service's specific features.

An example criteria catalog can be found in chapter 9.6 of the master's thesis.

DECIDING WHETHER TO OUTSOURCE A SPECIFIC TASK OR SERVICE SHOULD NOT ONLY TAKE INTO ACCOUNT COSTS, BUT SHOULD ALSO INCLUDE AN EVALUATION OF COMPETITIVE DIFFERENTIATION AND STRATEGIC IMPORTANCE.

Figure 4: Matrix to support decision on whether to outsource IT activities

9. IT ROADMAP

Today's companies are facing an enormous challenge: the world is not in the process of becoming digital – it already is digital. Digitalization, and all the technological changes and customer requirements associated with it, brings new opportunities and new challenges for businesses. Additionally, product strategies are changing – including that of SAP. To help companies realize their goals as effectively and efficiently as possible, the SAP Basis team must be involved in developing an IT roadmap and a digitalization and cloud strategy.

A detailed examination of the following recommendations can be found in chapter 7.9 of the master's thesis.

A. RECOMMENDATIONS

A1. UNDERSTAND AND CO-DEVELOP A DIGITALIZATION STRATEGY

A comprehensible, transparent strategy will enable SAP Basis to put it into practice and apply it to the resulting requirements and activities. Here, the main role of SAP Basis is to support and highlight new business models through implementation of the strategy – models which require resources in terms of skills and capital, but which will also lead to benefits. Furthermore, the SAP Basis team must identify and source the necessary skills and resources early on.

A2. INTEGRATE THE EXPERTISE OF SAP BASIS

The SAP Basis team should contribute its extensive knowledge and expertise in SAP technology during the development of the IT strategy and roadmap. Responsibility for this predominantly lies with the CIO, who is the main flagbearer for the IT strategy and IT department. The SAP Basis team should also act as a sparring partner for individuals and committees/boards with a significant influence on the strategies (e.g. enterprise architects).

A3. CO-DEVELOP ARCHITECTURE GUIDELINES

One element of an IT or cloud strategy may involve defining architecture guidelines and a policy framework for using and sharing certain services. The SAP Basis team should be actively involved in this, by collaborating on the development of policies and architecture guidelines and contributing their expertise in SAP technology.

B. BENEFITS & OUTCOMES

Through the involvement of the SAP Basis team, solutions can be rolled out more quickly and integrated into the existing system landscape more effectively. This is partly because solutions are known in advance and the required expertise either already exists or is in the process of being sourced. Overall, this enables the roadmap to be implemented more easily.

Furthermore, a clear digitalization and cloud strategy, including opportunities for deployment, offers guidance and orientation for stakeholders. These stakeholders then know exactly which areas the company wants to grow in/focus on, what's possible and not possible, and what's permitted. This gives stakeholders and companies a valid point of reference to follow at all times.

In turn, this will lead to increased acceptance within SAP Basis and a more workable implementation for the team – because the aforementioned expertise is already made available in the strategy. Finally, this will make it easier and more cost-effective to safeguard operations in what is a manageable system landscape.

C. CHANGING PERCEPTIONS

The SAP Basis team is often seen as an obstruction, putting the brakes on projects or new technology rollouts. This is partly because they are consulted too late when it comes to the technical feasibility of projects or the integration of new technologies and applications in the existing landscape.

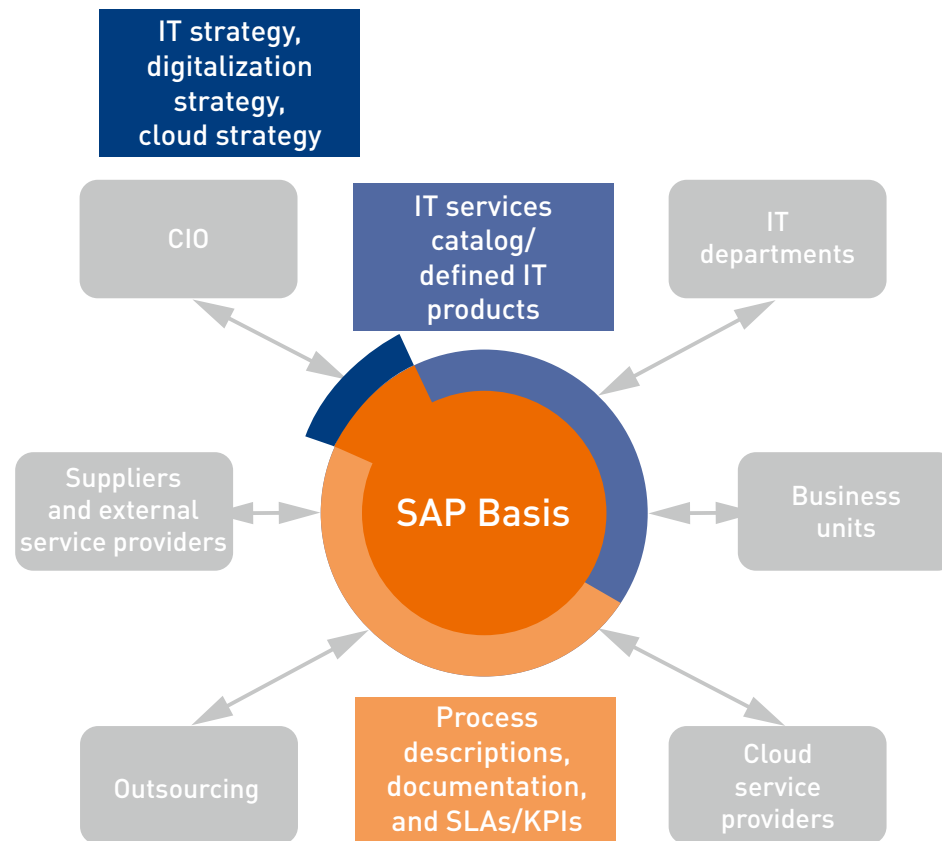


Figure 5: Positioning and communication of the SAP Basis team

By implementing these recommendations, the SAP Basis team can – to some extent – position itself in a new way within the IT department. SAP Basis now has a clearly defined self-image (internal perception) as well as a clear positioning and remit within the IT department (external perception), as illustrated in Figure 5. Through its involvement in developing the IT and digitalization strategies, and through clear communications with the CIO, the SAP Basis team can also familiarize itself with technologies and key issues early on. As a result, it is well equipped to handle inquiries from other business units or IT teams and can deal with these proactively. The SAP Basis team is supported by an IT service and product catalog that describes the scope of its services. Furthermore, for internal communication and communication with external providers – such as suppliers, outsourcing or out-tasking partners, and cloud-service providers – SAP Basis now has up-to-date, informative documentation and process descriptions at its disposal. There are also SLAs and meaningful KPIs available for the control, assessment, and monitoring of external partners.

THROUGH ITS INVOLVEMENT IN DEVELOPING THE IT AND DIGITALIZATION STRATEGIES, AND THROUGH CLEAR COMMUNICATIONS WITH THE CIO, THE SAP BASIS TEAM CAN ALSO FAMILIARIZE ITSELF WITH TECHNOLOGIES AND KEY ISSUES EARLY ON.

10. STRUCTURE OF THE MASTER'S THESIS

Detailed information on the approach, outcomes, and the relevant empirical studies mentioned in this publication can be found in the master's thesis.

The thesis is divided into 11 chapters. Chapter one focuses on the impact of trends and the changing SAP product portfolio. It also includes the objectives of the thesis and the approach taken, and references participating institutions.

Chapter two looks at the title of the thesis and its various elements. It provides a basic overview of the areas and topics that are relevant within the scope of the project.

The third chapter focuses on the age of digitalization, influencing factors related to this, and digital transformation. It also looks at the changing role of IT. Finally, it examines perspectives on SAP and its changing product portfolio.

Chapter four takes an abstract look at the underlying challenge facing the SAP Basis team of tomorrow, using a model and the approach previously outlined. To describe the model, there is a brief digression to software technology.

The fifth chapter documents the approach and results of the survey conducted by DSAG at the start of the project. In chapter 5.1, there is a description of the methodology that was applied and documentation on the empirical social study. In section 5.2, the results from the survey are presented in a general context.

Chapter six provides insight into the project outcomes that formed the basis for the various key recommendation areas and the recommendations themselves. Based on the results of the survey and workshop, a description of the SAP Basis team and its current forms was drafted. Following this, the challenge, assumptions, and process specifics from chapters three and five are described in detail.

The seventh chapter highlights the critical action areas from the perspective of the SAP Basis team. For each area, there is a description of the current situation, the related challenges, the desired situation/objectives, recommendations and measures, as well as the resulting benefits and demands on SAP and DSAG.

Two hypotheses are used to support/confirm the recommendations made in chapter eight and the resulting development of SAP Basis.

Chapter nine takes a further look at the topics and recommendations presented in chapter seven.

In chapter 10, a case study is provided for the transition from the current situation to the desired outcome. As part of this, the results from chapter six – which were deduced by applying selected recommendations from chapter seven and the detailed examination in chapter nine – are applied to produce the desired outcome.

In conclusion, chapter 11 features a closing statement as well as a critical reflection on the project. In addition, it highlights any constraints/limitations that were encountered. There is also a perspective on how the results of the project could be applied.

11. ABOUT THIS PUBLICATION

IMAGES SOURCED FROM:

Figure 2:

Voigt, Kai-Ingo: (industrial management), Industriebetriebslehre aus prozessorientierter Sicht, Springer Verlag, Berlin / Heidelberg, 2008, p. 455

Figure 4:

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